

### REMARKS

Applicant respectfully requests reconsideration. Claims 1-9 and 26-32 were previously pending in this application. Claims 1, 2, and 7 have been amended. Claims 4-6 and 31-32 have been cancelled. Claim 33 has been added. Claims 1-3, 7-9, 26-30, and 33 remain pending with claims 1 and 28 being independent. No new matter has been added.

#### Rejection of Claims 1-9, 12, and 25 under 35 U.S.C. §112, first paragraph

Claims 1-9, 12, and 25 were rejected under 35 U.S.C. §112, first paragraph, because, according to the Patent Office, the specification does not enable any person skilled in the art to which it pertains, or with which it is most closely connected, to make the invention commensurate in scope with these claims.

Claims 1 and 2 have been amended such that each  $R^1-R^3$  is independently hydrogen or  $C_1-C_{12}$  alkyl and each  $R^5-R^6$  is independently hydrogen or alkyl. Applicant believes the amendments to claims 1 and 2 obviate the rejection on this ground. Claims 12 and 25 were previously cancelled.

Accordingly, withdrawal of the claim rejection on this ground is respectfully requested.

#### Rejection of Claims 1-9 and 26-30 under 35 U.S.C. §103(a)

Claims 1-9 and 26-30 were rejected under 35 U.S.C. §103(a) as being unpatentable over European Patent No. EP 0207696A1 ("Leguzza") in view of Solomons et al., Organic Chemistry 2008, 9<sup>th</sup> Edition, John Wiley & Sons, Inc., page 224-236 ("Solomons"). The Office Action states that an artisan of ordinary skill would have been motivated to make the alpha-iodoketone of the present invention in place of the alpha-bromoketone of Leguzza, because Solomons teaches that iodine is a better leaving group than bromine. The Office Action further states that one of ordinary skill in the art would have been motivated to convert the alpha-haloketone to the desired product to both increase the yield of the reaction and obtain the desired product via a more facile method having one less synthetic step than the process described in Leguzza.

Applicant respectfully traverses the rejection. Applicant does not believe that the Patent Office has presented a reason, except in hindsight in view of Applicant's specification, as to why one of ordinary skill in the art at the time Applicant's invention was made would have modified

Leguzza or Solomons, alone or in combination, to produce the invention as claimed, or why one of ordinary skill in the art would have viewed the results and benefit of Applicant's invention as predictable in view of the teaching of Leguzza or Solomons. The Patent Office must provide an articulated reasoning as to why the claimed invention would have been obvious in view of the references, as is required to support a *prima facie* case of obviousness under 35 U.S.C. §103(a).

Applicant respectfully disagrees with the assertion in the Office Action that it would have been obvious for one of ordinary skill in the art to modify the teachings of Leguzza with the teachings of Solomons to produce a process as recited in claim 1 or in claim 28. By contrast, those of ordinary skill in the art would expect that the use of iodine in the Leguzza process would produce an alpha-iodoketone that is highly unstable, relative to the corresponding alpha-bromoketone, increasing the risk of undesired side reactions. For example, the use of iodine in place of bromine, hydrobromic acid, and acetic acid in the Leguzza process would produce an alpha-haloketone under much less acidic conditions, relative to the conditions of the Leguzza process, and one of ordinary skill in the art would expect that placing an alpha-haloketone under less acidic reaction conditions would result in an undesired Favorskii rearrangement of the alpha-haloketone. (Please see March, J., "8-7: The Favorskii Rearrangement," Advanced Organic Chemistry, 4<sup>th</sup> Edition, John Wiley & Sons, Inc., page 1080-1081, copy enclosed.) This is particularly so for an alpha-iodoketone, which is more reactive than an alpha-bromoketone, as acknowledged in the Office Action. Thus, one of ordinary skill in the art would have no reasonable expectation of success in modifying the process of Leguzza with the teaching of Solomons, as suggested in the Office Action.

Applicant also notes that, in determining the differences between the prior art and the claimed invention, Patent Office must consider not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. Leguzza differs from the present invention in that it employs the use of bromine, hydrobromic acid, and acetic acid to form an alpha-bromoketone. Leguzza also involves separate steps of (1) forming an isolated alpha-bromoketone and (2) subsequently adding thiourea to the isolated alpha-bromoketone, to form the product. By contrast, the process recited in claim 1 does not require the isolation of the alpha-haloketone intermediate and does not employ the use of bromine, hydrobromic acid, and acetic acid.

Because each claim limitation is not taught or suggested by Leguzza or Solomons, and there is no articulated reasoning as to why one of ordinary skill in the art would modify the teachings of Leguzza and/or Solomons to predictably reach the invention as claimed, claims 1 and 28 are patentable over Leguzza and Solomons. Claims 2-3, 7-9, and 26-27, and claims 29-30 depend from claim 1 and claim 28, respectively, and, thus, are also patentable over Leguzza and Solomons, for at least this reason.

Accordingly, withdrawal of the rejection of these claims is respectfully requested.

Rejection of Claim 31 under 35 U.S.C. §102(b)

Claim 31 was rejected under 35 U.S.C. §102(e) as being anticipated by Yokum et al., Tet. Lett. 1997, 38, 4013-4016 ("Yokum").

Without acceding to the merit of the rejection, claim 31 has been cancelled. Accordingly, withdrawal of the claim rejection on this ground is respectfully requested.

Rejection of Claim 32 under 35 U.S.C. §103(a)

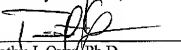
Claim 32 was rejected under 35 U.S.C. §103(a) as being unpatentable over Yokum.

Without acceding to the merit of the rejection, claim 32 has been cancelled. Accordingly, withdrawal of the claim rejection on this ground is respectfully requested.

In view of the above amendment, Applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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